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REMARKS

Claims 1-37 are currently pending in the application. Claims 1, 11-13, 15, 18, 19, 24, and 31-37 were rejected. Claims 2-10, 14, 16, 17, 20-23, and 25-30 were objected to.

The Examiner rejected claims 1, 11-13, 15, and 18 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,838,684 (Wicki). The Examiner also rejected claims 19, 24, and 31-37 over Wicki in combination with a variety of other references. The rejections are respectfully traversed.

Wicki describes a router system which "establishes interconnection of input buffers selected by arbitration with a predetermined output port through a crossbar switch." See column 2, lines 8-10. In the Summary of the Invention, Wicki defines the operation of the router system as "plesiosynchronous" or "asynchronous." "Simply stated, the router system according to the present invention is not synchronous. Frames arrive with one clock and are clocked out with another clock." See column 2, lines 24-29.

A block diagram of Wicki's router system is shown in Figure 1. "Router system 3 further includes a mesh link clock domain 110 per input port and a local clock domain 109." See column 4, lines 31-33. As can be seen from the figure, each of the circuit elements of router system 3 belongs to one or the other of the clock domains. Significantly, "[l]ocal clock domain 109 is clocked according to local clock 203." See column 4, lines 34-35.

Operation of router system 3 is further described with reference to the flowchart of Figure 3D. Wicki states that "each router system 3...interfaces with six independent incoming clock domains driven by a clock signal arriving with a data frame. Data, clock and control signals are received....at n input ports. Each router system 3 has a local clock domain which is shared among global logic and the plurality of output ports." See column 6, lines 15-21. "Synchronization between input and local clock domains is accomplished at an input buffer element performing synchronization of frame data and providing storage for output port

contention." See column 6, lines 29-33. That is, everything following input buffer element 135 and within the dashed line indicated by reference designation 109 is part of the local clock domain which is, as alluded to earlier, "clocked according to local clock 203."

By contrast, claim 1 of the present application recites "an asynchronous crossbar" which operates in an "asynchronous domain characterized by transmission of data according to an asynchronous handshake protocol." Because Wicki's crossbar is included within local clock domain 109, it cannot be characterized as operating in an asynchronous domain as recited in claim 1. Reference to Figure 2 of Wicki and the corresponding description further emphasizes the fact that the operation of the circuitry in the local clock domain is controlled by the local clock signal.

Thus, Wicki does not describe an asynchronous crossbar which operates in an asynchronous domain characterized by an asynchronous handshake protocol. Rather, it is the ability of Wicki's router system to tolerate latency and to support communication between multiple clock domains which gives his router system the appearance of operating in a manner which is other than synchronous, i.e., its "plesiosynchronous" nature (e.g., see col. 4, lines 36-40). Because Wicki does not teach or suggest this limitation, the rejection of claim 1 over Wicki should be withdrawn for at least this reason. Moreover, because each of claims 2-37 depends either directly or indirectly from claim 1, the rejections of these claims should also be withdrawn for at least this reason.

The Applicants respectfully acknowledge the Examiner's indication of allowable subject matter in claims 2-10, 14, 16, 17, 20-23, and 25-30. However, in view of the foregoing, the Applicants believe these claims to be allowable in their current condition without amendment.
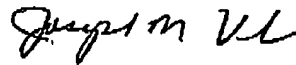
In view of the foregoing, Applicants believe all claims now pending in this application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is

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respectfully requested. If the Examiner believes a telephone conference would expedite

prosecution of this application, please telephone the undersigned at (510) 663-1100.

Respectfully submitted,
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